2021-03-11

Introduction to Cognitive Behavioral Therapy for Physicians

Elizabeth C. Dykhouse
University of Massachusetts Medical School

Introduction to Cognitive Behavioral Therapy for Physicians

Elizabeth C. Dykhouse, PhD

Director of Behavioral Science, Worcester Family Medicine Residency

Assistant Professor, Department of Family Medicine and Community Health,
University of Massachusetts Medical School

Agenda

- What is CBT?
- Introduction to basic skills
- Evidence for use in primary care/family medicine
- CBT for panic and situational anxiety
- CBT for ourselves

What is Cognitive Behavioral Therapy?

- Is this something you have learned about before?

What is Cognitive Behavioral Therapy?

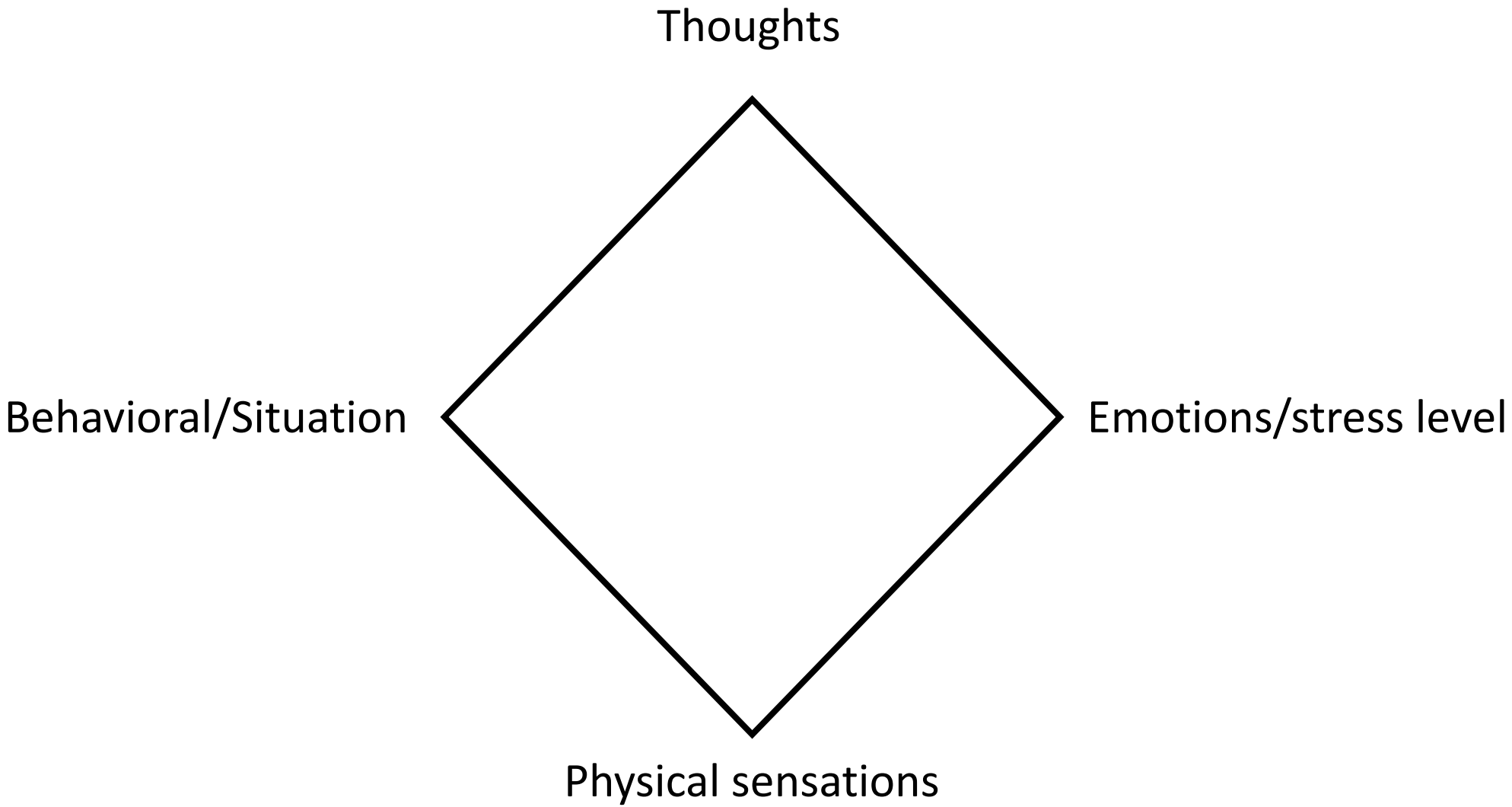
- “CBT”
- Rooted in the idea that how we ***think*** and ***feel*** influences our ***behavior***
- Focus is on functioning and skills building; goal oriented and problem focused

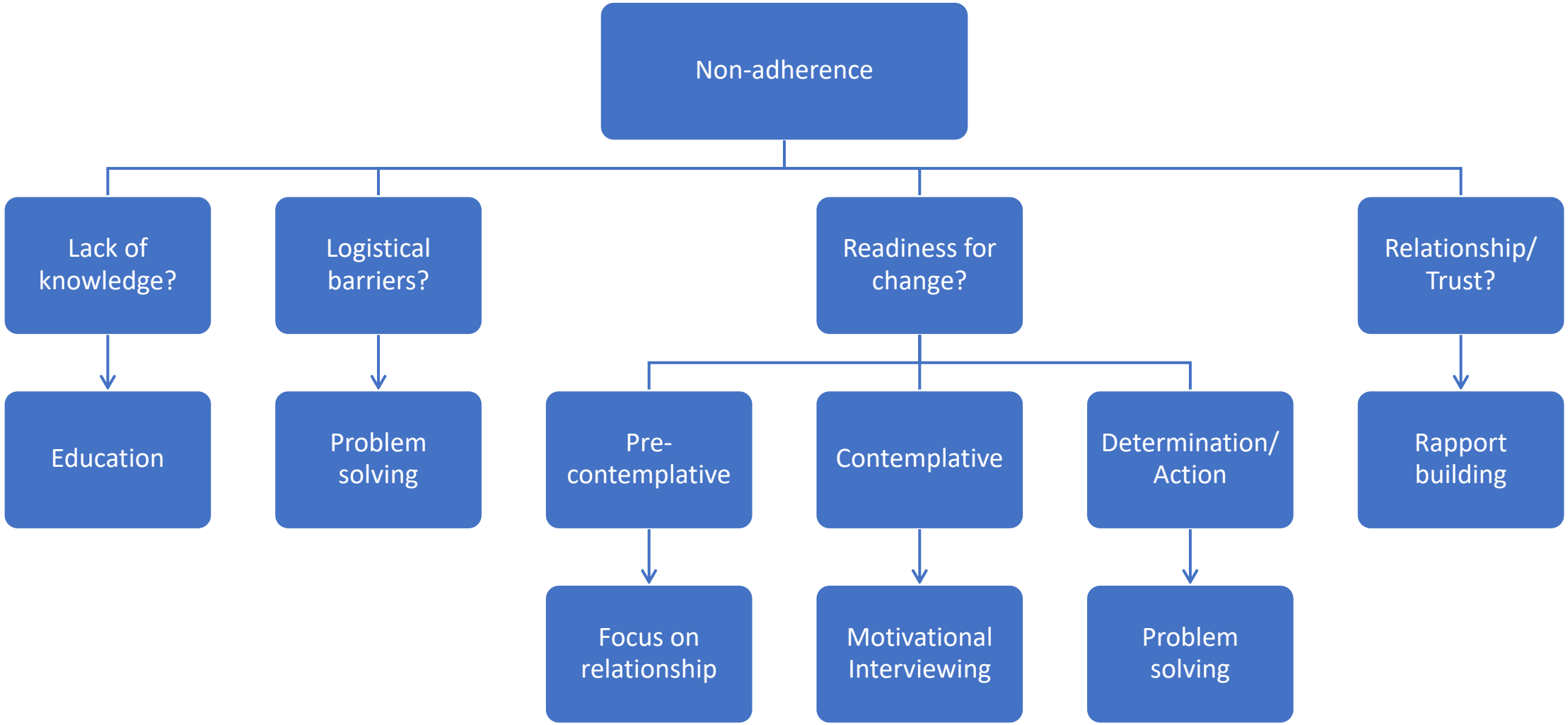
- Typically a skill for trained counselors but some evidence for physician use in practice

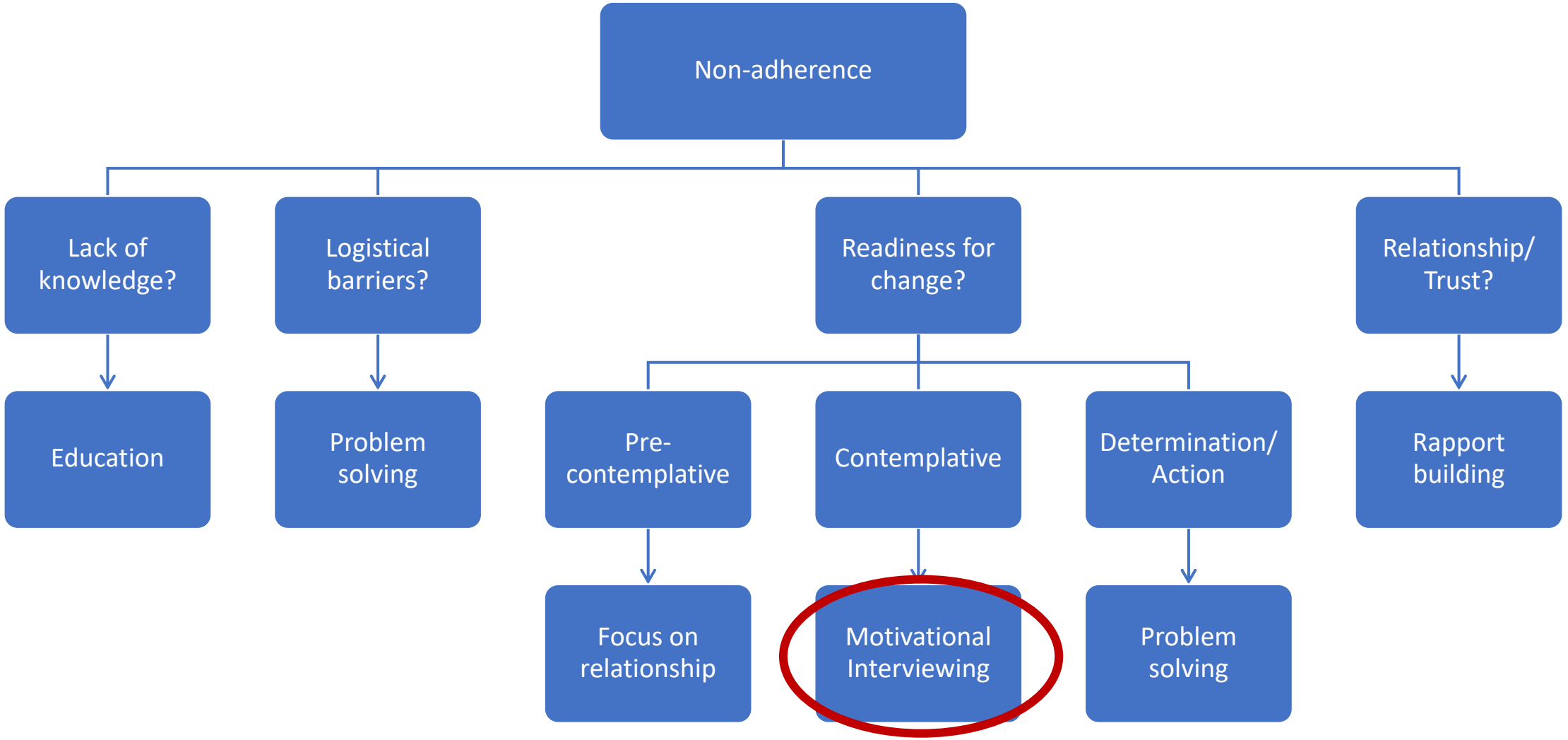
What is Cognitive Behavioral Therapy?

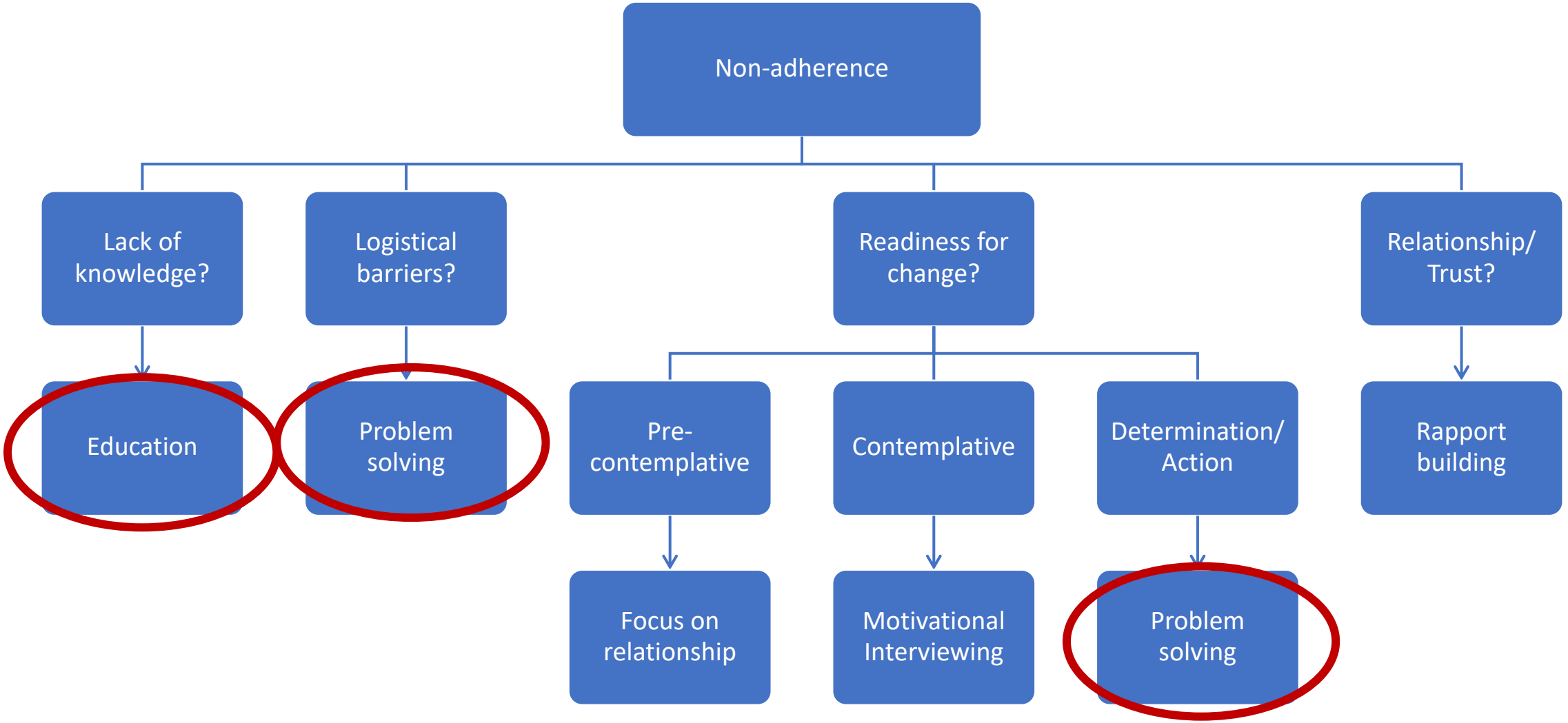
- Developed by Aaron T. Beck, MD in the 1960s
- “Cognitive therapy”
- Designed to be time limited, typically 6 to 14 sessions
- Often manualized
- Aims to teach the patient to “be their own therapist”
- Focus on relapse prevention

(Beck & Beck, 2011)


Thoughts
Behavioral/Situation
Emotions/stress level
Physical sensations


Non-adherence
Lack of knowledge?
Logistical barriers?
Readiness for change?
Relationship/ Trust?
Education
Problem solving
Pre-contemplative
Contemplative
Determination/ Action
Rapport building
Focus on relationship
Motivational Interviewing
Problem solving


Non-adherence
Lack of knowledge?
Logistical barriers?
Readiness for change?
Relationship/ Trust?
Education
Problem solving
Pre-contemplative
Contemplative
Determination/ Action
Rapport building
Focus on relationship
Motivational Interviewing
Problem solving


Non-adherence
Lack of knowledge?
Logistical barriers?
Readiness for change?
Relationship/ Trust?
Education
Problem solving
Pre-contemplative
Contemplative
Determination/ Action
Rapport building
Focus on relationship
Motivational Interviewing
Problem solving

CBT in Primary Care

- Psychoeducation
- Mindfulness and acceptance-based behavioral techniques
- Relaxation training
- Exposure
- Cognitive restructuring
- Behavioral activation

(Shepardson, Funderburk, & Weisberg, 2016)

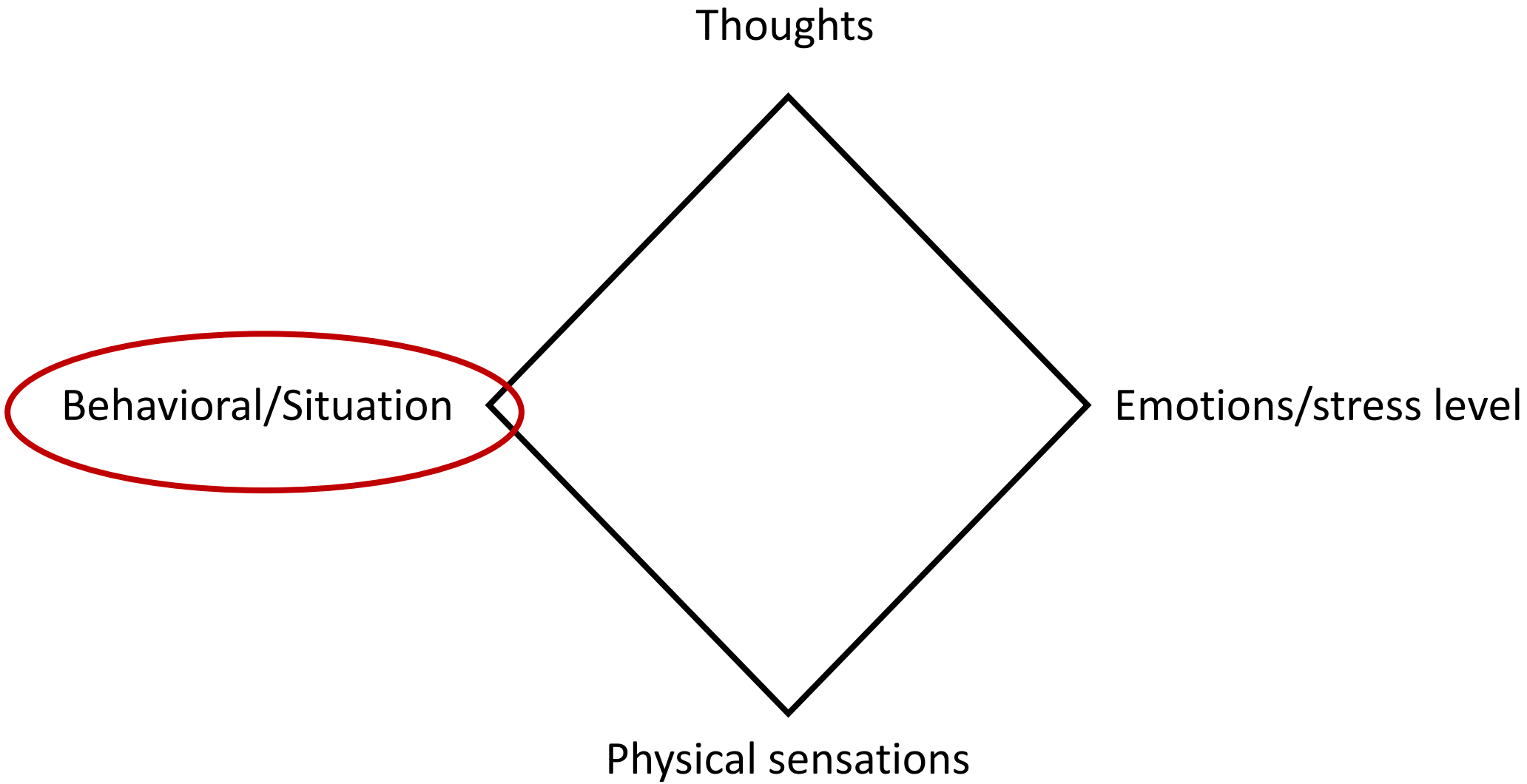
CBT in Primary Care

- **Psychoeducation**
- Mindfulness and acceptance-based behavioral techniques
- **Relaxation training**
- Exposure
- **Cognitive restructuring**
- **Behavioral activation**

(Shepardson, Funderburk, & Weisberg, 2016)

Psychoeducation

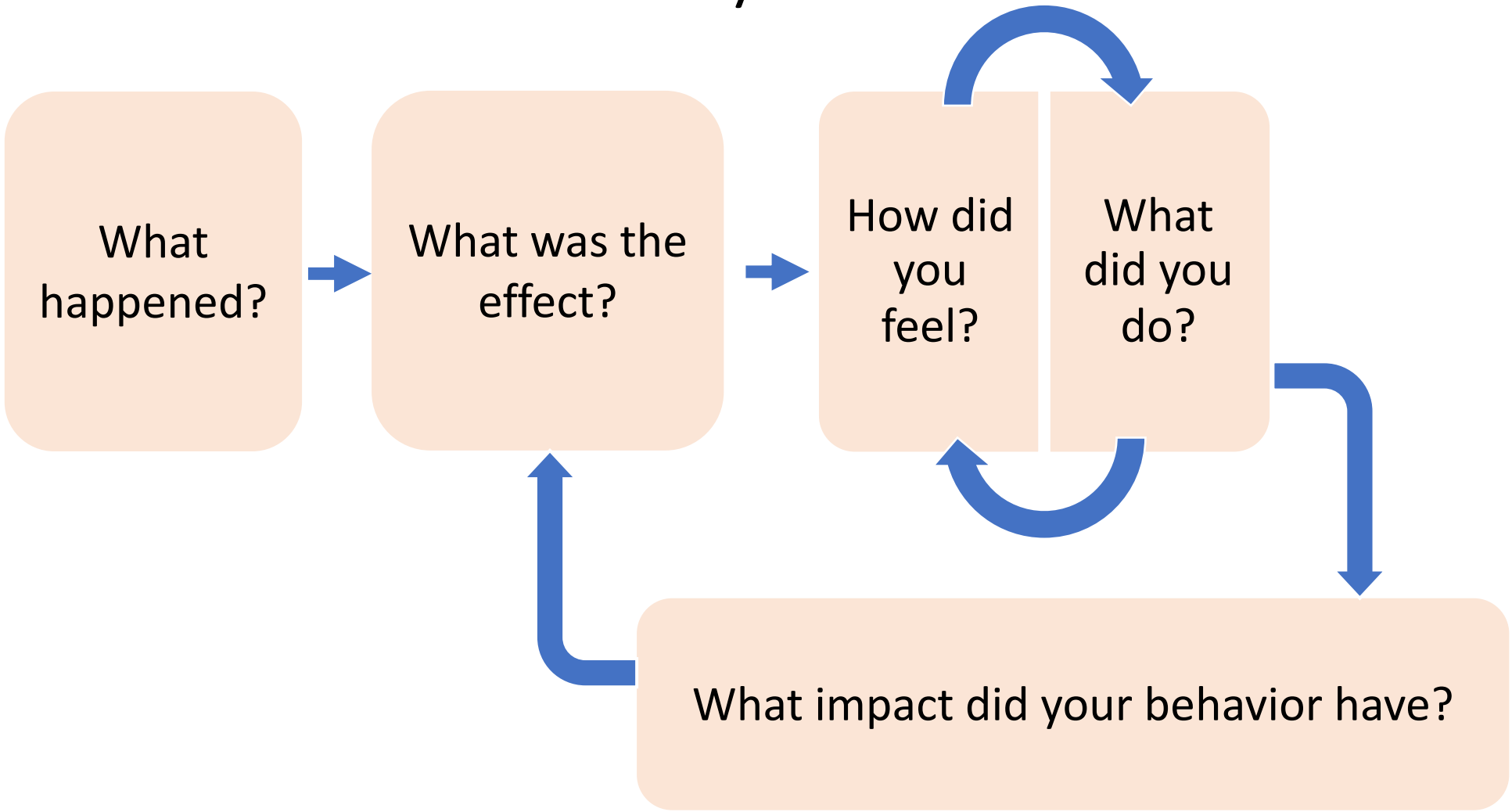
- Typical first step in CBT
- Providing patients with basic information about their symptoms and treatment
- Goals are:
  - Understanding
  - Normalization
  - Correcting misperceptions
  - Self-management
  - Providing rationale


Thoughts
Behavioral/Situation
Emotions/stress level
Physical sensations

Behaviors/Situations

- Behavioral Activation
- Distraction
- Exposure/behavior experiment
- Shaping
- Chaining
- Positive reinforcement/rewards
- Behavior tracking

Behavior chain analysis

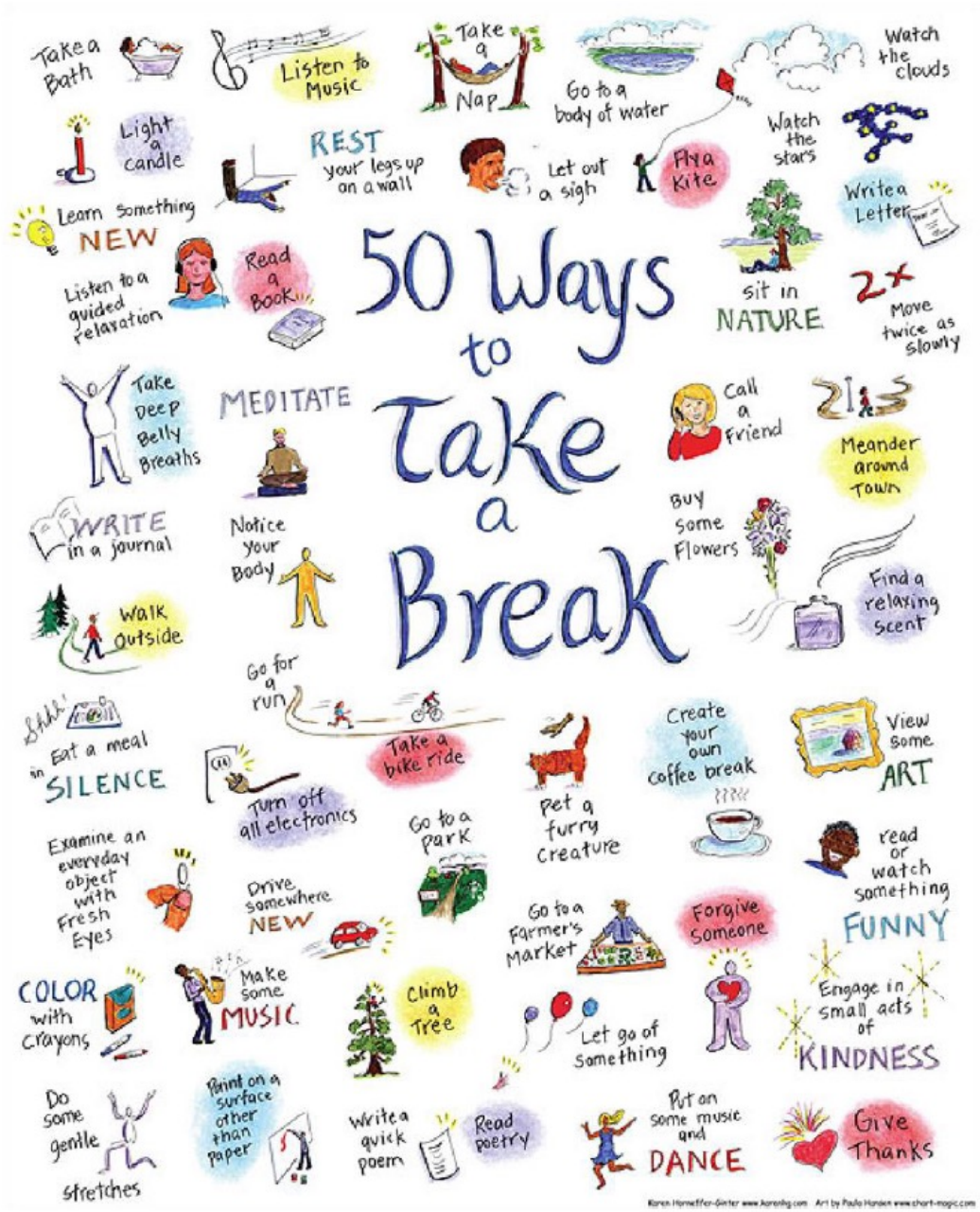


(Martell, Dimidjian, & Herman-Dunn, 2013, p. 41)

Weekly Schedule for Behavioral Activation

Create a schedule of activities that will lead to you having positive experiences in your day. If you are feeling depressed or unmotivated, it might be difficult to complete large or complex tasks. If this is the case, start with simple goals and work your way up to more challenging activities.

DAY	MORNING	AFTERNOON	EVENING
Example	• *Wake by 8 AM* • *Eat a full breakfast*	• *Go for a 15 minute walk*	• *Call a friend* • *Practice guitar*
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			



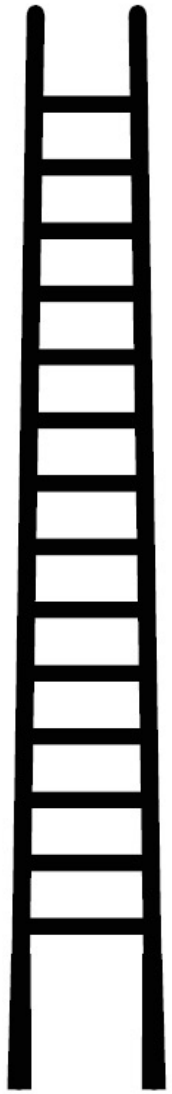
Exposure/Behavior experiment

- Focuses on the relationship between anxiety and avoidance
- Creating a fear hierarchy
- Designing experiments for testing fears/worries
- Encouraging home practice after initial exposure

- Assessing appropriateness

Avoidance Hierarchy

Construct a ladder of places or situations that you avoid. At the top of the ladder put those which which make you most anxious. At the bottom of the ladder put places or situations you avoid, but which don't bother you as much. In the middle of the ladder put ones that are 'in-between'. Give each item a rating from 0-100% according to how anxious you would feel if you had to be in that situation. Overcome your anxiety by approaching these situations, starting from the bottom of the ladder.



Situation	Anxiety (0-100%)

Behavioral Experiment

Prediction

What is your prediction?
What do you expect will happen?
How would you know if it came true?

Rate how strongly you believe this will happen (0-100%)

Experiment

What experiment could test this prediction? (where & when)
What safety behaviors will need to be dropped?
How would you know your prediction had come true?

Outcome

What happened?
Was your prediction accurate?

Learning

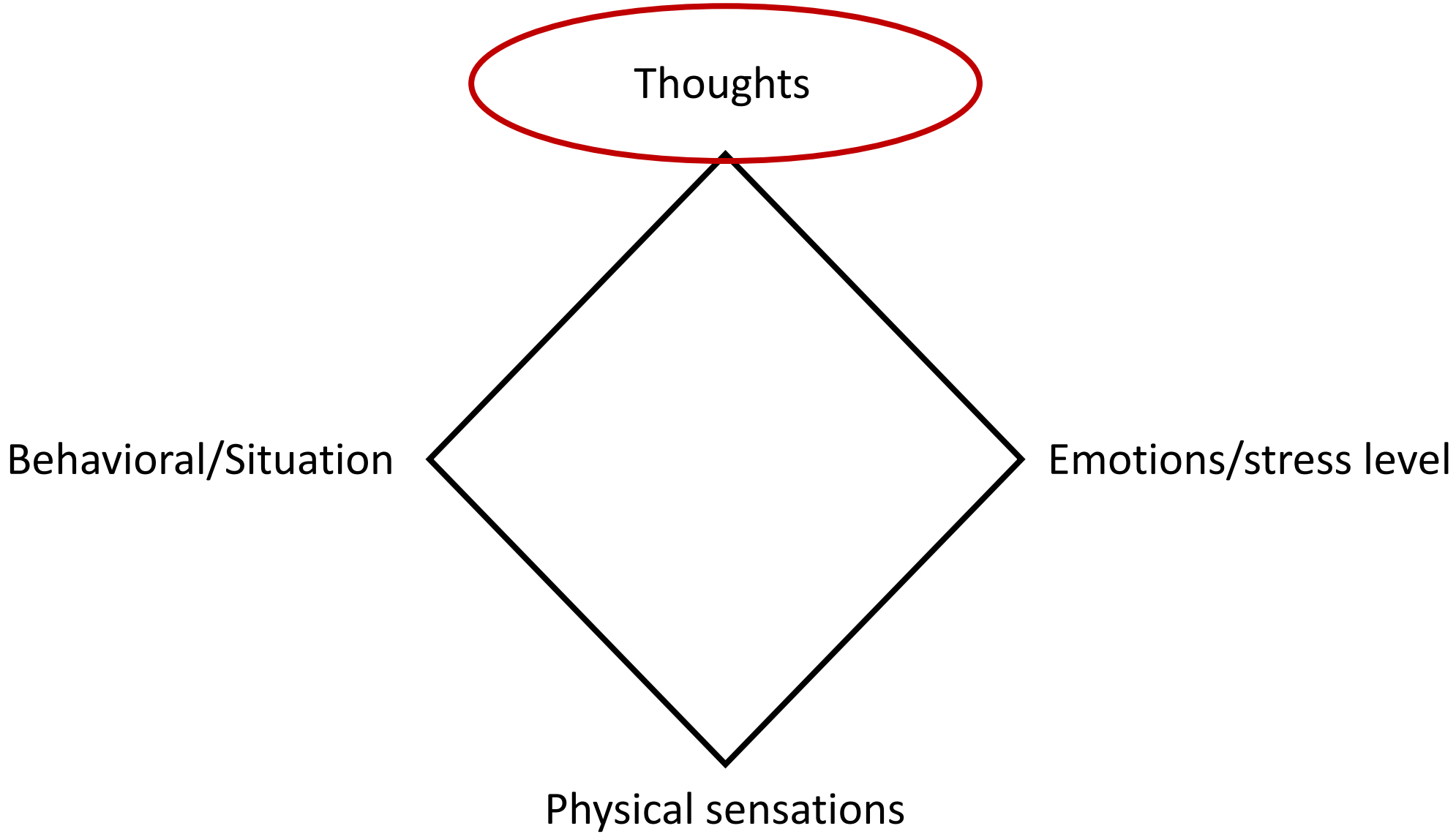
What did you learn?
How likely is it that your predictions will happen in the future?

Rate how strongly you agree with your original prediction now (0-100%)

Behavior tracking

- Simply tracking behaviors can lead to change
- Pattern recognition

- Can be helpful for mood disorders and behavior change…
  - Mood symptoms
  - Sleep patterns
  - Diet and exercise
  - Medication adherence
  - Etc.


Thoughts
Behavioral/Situation
Emotions/stress level
Physical sensations

Thoughts vs. Emotions?

Thoughts/Cognitive

- Unhelpful thinking styles
- Cognitive restructuring
- Thought record
- Self-reflection

Unhelpful Thinking Styles

All or nothing thinking

Sometimes called 'black and white thinking'.

If I'm not perfect I have failed.

Either I do it right or not at all.

Over-generalizing

Seeing a pattern based upon a single event, or being overly broad in the conclusions we draw.

Emotional reasoning

Assuming that because we feel a certain way what we think must be true.

I feel embarrassed so I must be an idiot.

should must

Using critical words like 'should', 'must', or 'ought' can make us feel guilty, or like we have already failed.

If we apply 'shoulds' to other people the result is often frustration.

Mental filter

Only paying attention to certain types of evidence.

Noticing our failures but not seeing our successes.

Disqualifying the positive

Discounting the good things that have happened or that you have done for some reason or another.

That doesn't count

Labeling

Assigning labels to ourselves or other people.

I'm a loser.
I'm completely useless.
They're such an idiot.

Personalization

"this is my fault."

Blaming yourself or taking responsibility for something that wasn't completely your fault.

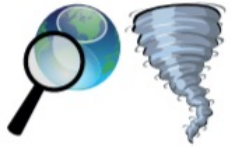
Conversely, blaming other people for something that was your fault.

Jumping to conclusions

There are two key types of jumping to conclusions:

- **Mind reading** (imagining we know what others are thinking).
- **Fortune telling** (predicting the future).

Magnification (catastrophizing) & minimization



Blowing things out of proportion (catastrophizing), or inappropriately shrinking something to make it seem less important.

PSYCHOLOGYTOOLS®

https://www.psychologytools.com/resource/unhelpful-thinking-styles/

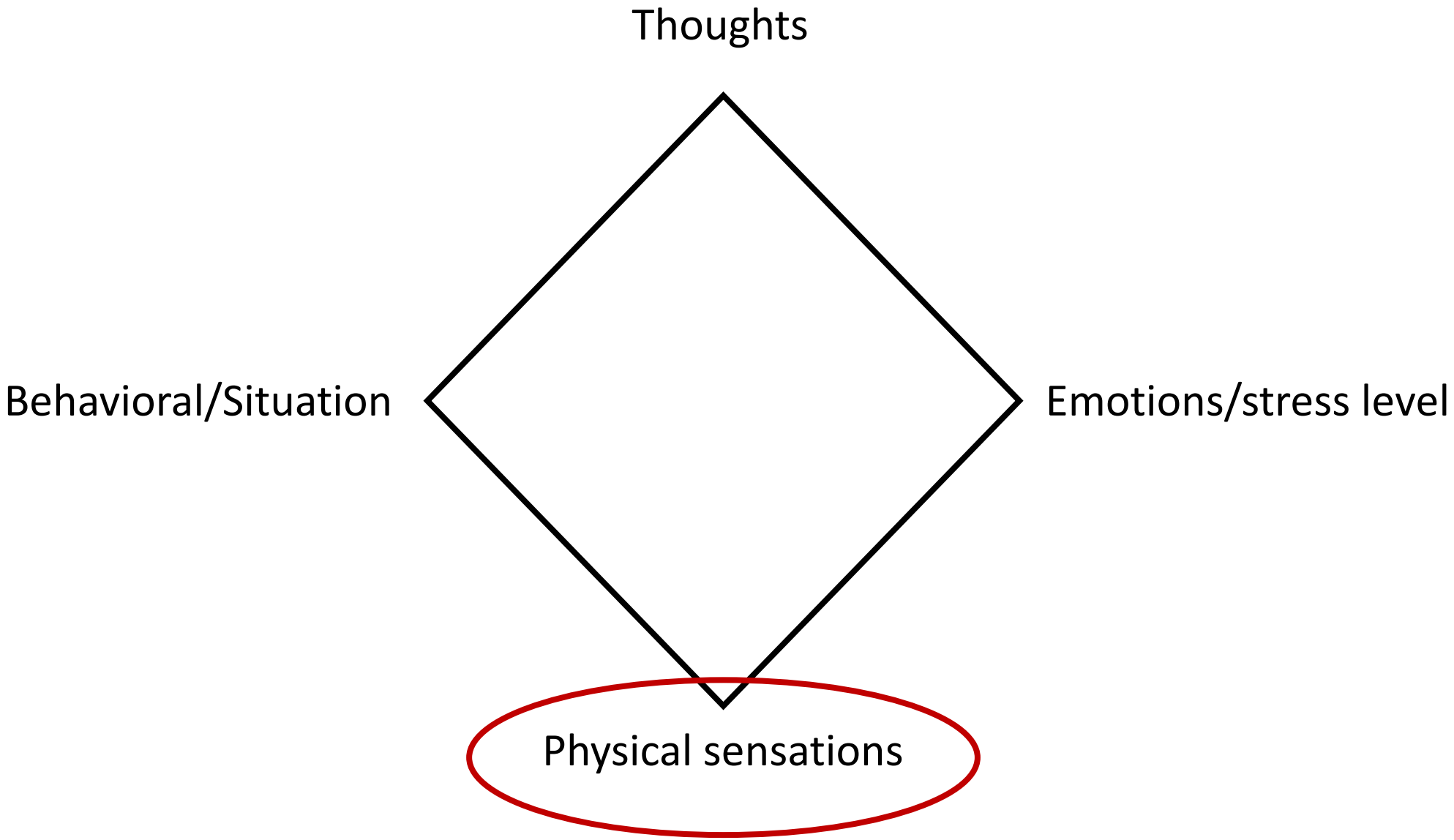
Cognitive restructuring

- Identifying automatic and dysfunctional thoughts
- Thought records
  - Examining evidence for and against

- Assessing appropriateness

CBT Thought Record

Situation	Emotion or feeling	Negative automatic thought	Evidence that supports the thought	Evidence that does not support the thought	Alternative thought	Emotion or feeling
Describe what was happening: Who, what, when where?	Emotions can be described with one word: e.g. angry, sad, scared Rate 0 - 100%	Identify one thought to work on: What thoughts were going through your mind? What memories or images were in your mind?	What facts support the truthfulness of this thought or image?	What experiences indicate that this thought is not completely true all of the time? If my best friend had this thought what would I tell them? Are there any small experiences which contradict this thought?	Write a new thought which takes into account the evidence for and against the original thought.	How do you feel about the situation now? Rate 0 - 100%


Thoughts
Behavioral/Situation
Emotions/stress level
Physical sensations

Physical sensations

- Teaching patients about recognizing and addressing physiological arousal
- Four common techniques…
  - Diaphragmatic breathing
  - Guided imagery
  - Mindfulness meditation
  - Progressive muscle relaxation
- Practice together and rate before and after

What is the Relaxation Response?

- First think about teaching patient about “fight or flight” response and how that might apply to their particular condition (pain, anxiety, etc.)

- Helps to activate parasympathetic nervous system “the calming system”
- Opposite effect from the sympathetic nervous system, allowing the body to “rest and digest”

Diaphragmatic or Belly Breathing

- Sit or lie in a comfortable position, legs shoulder width apart, eyes closed, jaw relaxed, arms loose.
- Place one hand on your chest, one hand on your stomach.
- Try to breathe so that only your stomach rises and falls. Breathe with your nose only.
  - Inhale: Concentrate on keeping your chest relatively still. Imagine you are trying to hold up a pair of pants that are slightly too big.
  - Exhale: Allow your stomach to fall as if you are melting into your chair/bed. Repeat the word “calm” to provide focus as you are practicing the exercise.
- Take several deep breaths moving only your stomach in and out with the breath. Match the length of you inhale to the length of your exhale (or double it), 4 or 3 seconds inhale, and 6 seconds exhale
- Practice 3-5 minutes daily until the breathing feels comfortable.

Progressive Muscle Relaxation

- Tighten and then relax muscle groups moving from feet up to face
- Check in advance for problems with cramping or pain
- Emphasis on noticing the relaxed state
- Can also do a body scan and just focus on relaxing each muscle group from feet to face

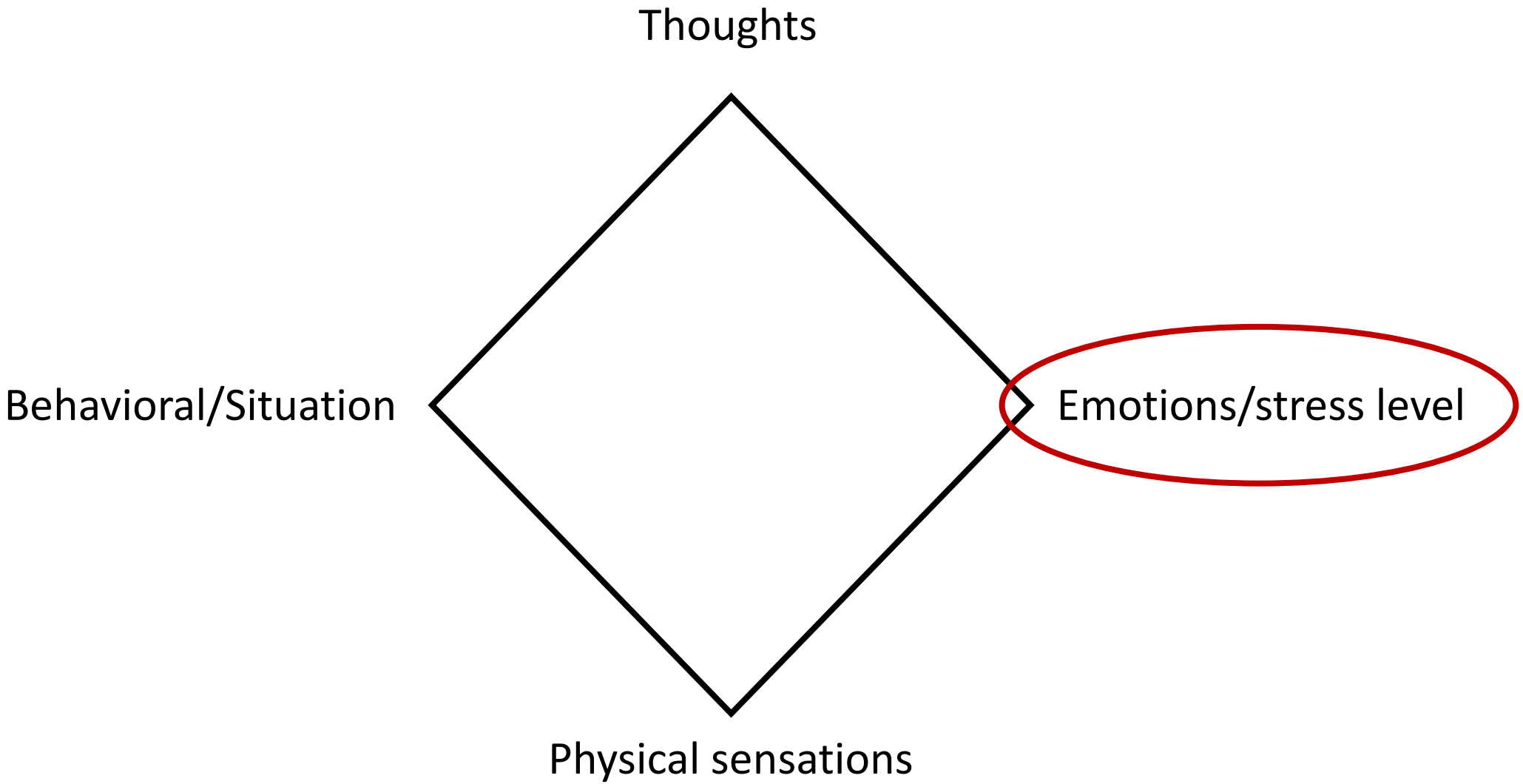
Imagery

- Often used in combination with diaphragmatic breathing
- Warn to avoid when driving
- Work with patient to identify their preference

- Pleasant imagery
  - Go to a relaxing place in your mind, describe everything you see, hear, touch, taste, and smell
  - Use all 5 senses to envision your comfortable and peaceful scene
- Pain control
  - We know that mental focus on pain can lead to increased pain, so focusing on it in an intentional way can also bring relief
  - Imagine pain as “red-hot” turning to “blue-cool,” or a muscle “knot” working its way out to a “smooth line”

Distraction and Mindfulness Techniques

- Focal Point Technique
  - Focus on one point in a room (e.g., painting, bookshelf, etc.)
  - Describe the image to yourself in detail (e.g., colors, how many books, etc.)
  - Talk to yourself about that one spot
  - Breathe!
- 5, 4, 3, 2, 1 - grounding using 5 senses (5 things you can see, 4 things you can feel, 3 things you can hear, 2 things you can smell, 1 thing you can taste) – can modify this in different ways
- Counting
  - In your imagination: count and imagine each number in order on a contrasting background
  - In a room: Count tiles on a ceiling, freckles on your arm, or the number of blue objects in a room


Thoughts
Behavioral/Situation
Emotions/stress level
Physical sensations

Emotions/stress level

- These are harder to directly change
- Emotions can be impacted by medications
- Problem solving for stressors if possible

- These are the places that patients often want to start, but working on the other areas can help with these

Evidence for CBT in Primary Care

Depression	Conradi, H. J., Bos, E. H., Kamphuis, J. H., & de Jonge, P. (2017). The ten-year course of depression in primary care and long-term effects of psychoeducation, psychiatric consultation and cognitive behavioral therapy. *Journal of affective disorders*, *217*, 174-182. Hollinghurst, S., Carroll, F. E., Abel, A., Campbell, J., Garland, A., Jerrom, B., ... & Thomas, L. (2014). Cost-effectiveness of cognitive-behavioural therapy as an adjunct to pharmacotherapy for treatment-resistant depression in primary care: economic evaluation of the CoBalT Trial. *The British Journal of Psychiatry*, *204*(1), 69-76. Twomey, C., O'Reilly, G., & Byrne, M. (2014). Effectiveness of cognitive behavioural therapy for anxiety and depression in primary care: a meta-analysis. *Family practice*, *32*(1), 3-15.

Evidence for CBT in Primary Care

Depression		Wiles, N. J., Thomas, L., Turner, N., Garfield, K., Kounali, D., Campbell, J., ... & Williams, C. (2016). Long-term effectiveness and cost-effectiveness of cognitive behavioural therapy as an adjunct to pharmacotherapy for treatment-resistant depression in primary care: follow-up of the CoBalT randomised controlled trial. *The Lancet Psychiatry*, *3*(2), 137-144.
	…in older adults	Serfaty, M. A., Haworth, D., Blanchard, M., Buszewicz, M., Murad, S., & King, M. (2009). Clinical effectiveness of individual cognitive behavioral therapy for depressed older people in primary care: a randomized controlled trial. *Archives of general psychiatry*, *66*(12), 1332-1340.
	…in adolescents	Clarke, G., DeBar, L. L., Pearson, J. A., Dickerson, J. F., Lynch, F. L., Gullion, C. M., & Leo, M. C. (2016). Cognitive behavioral therapy in primary care for youth declining antidepressants: a randomized trial. *Pediatrics*, e20151851.

Evidence for CBT in Primary Care

Anxiety		Shepardson, R. L., Funderburk, J. S., & Weisberg, R. B. (2016). Adapting evidence-based, cognitive-behavioral interventions for anxiety for use with adults in integrated primary care settings. *Families, Systems, & Health*, *34*(2), 114 Twomey, C., O'Reilly, G., & Byrne, M. (2014). Effectiveness of cognitive behavioural therapy for anxiety and depression in primary care: a meta-analysis. *Family practice*, *32*(1), 3-15.
	…with panic disorder	Roy-Byrne, P. P., Craske, M. G., Stein, M. B., Sullivan, G., Bystritsky, A., Katon, W., ... & Sherbourne, C. D. (2005). A randomized effectiveness trial of cognitive-behavioral therapy and medication for primary care panic disorder. *Archives of General Psychiatry*, *62*(3), 290-298.

Evidence for CBT in Primary Care

Eating disorders	Rose, C., & Waller, G. (2017). Cognitive–behavioral therapy for eating disorders in primary care settings: Does it work, and does a greater dose make it more effective?. *International Journal Of Eating Disorders*, doi:10.1002/eat.22778
Health outcomes after ACEs	Korotana, L. M., Dobson, K. S., Pusch, D., & Josephson, T. (2016). A review of primary care interventions to improve health outcomes in adult survivors of adverse childhood experiences. *Clinical psychology review*, *46*, 59-90.
Cardiovascular disease	Gulliksson, M., Burell, G., Vessby, B., Lundin, L., Toss, H., & Svärdsudd, K. (2011). Randomized controlled trial of cognitive behavioral therapy vs standard treatment to prevent recurrent cardiovascular events in patients with coronary heart disease: Secondary Prevention in Uppsala Primary Health Care project (SUPRIM). *Archives of internal medicine*, *171*(2), 134-140.

Evidence for CBT in Primary Care

Insomnia	Edinger, J.D., Wohlgemuth, W.K., Radtke, R.A., Marsh, G.R., Quillian, R.E. (2001). Cognitive behavioral therapy for treatment of chronic primary insomnia: A randomized controlled trial. *JAMA, 285*(14):1856–1864. doi:10.1001/jama.285.14.185
Chronic Pain	Barrett, K., & Chang, Y. (2016). Behavioral interventions targeting chronic pain, depression, and substance use disorder in primary care. *Journal Of Nursing Scholarship*, *48*(4), 345-353. doi:10.1111/jnu.12213 Wetherell, J. L., Afari, N., Rutledge, T., Sorrell, J. T., Stoddard, J. A., Petkus, A. J., ... & Atkinson, J. H. (2011). A randomized, controlled trial of acceptance and commitment therapy and cognitive-behavioral therapy for chronic pain. *Pain*, *152*(9), 2098-2107.

Evidence for CBT in Primary Care

Substance Use Disorders	Baillie, A. J., Sannibale, C., Stapinski, L. A., Teesson, M., Rapee, R. M., & Haber, P. S. (2013). An investigator-blinded, randomized study to compare the efficacy of combined CBT for alcohol use disorders and social anxiety disorder versus CBT focused on alcohol alone in adults with comorbid disorders: The Combined Alcohol Social Phobia (CASP) trial protocol. *BMC psychiatry*, *13*(1), 1-12. Papas, R. K., Sidle, J. E., Martino, S., Baliddawa, J. B., Songole, R., Omolo, O. E., ... & Maisto, S. A. (2010). Systematic cultural adaptation of cognitive-behavioral therapy to reduce alcohol use among HIV-infected outpatients in western Kenya. *AIDS and Behavior, 14*(3), 669-678. McHugh, R. K., Hearon, B. A., & Otto, M. W. (2010). Cognitive behavioral therapy for substance use disorders. *Psychiatric Clinics*, *33*(3), 511-525.

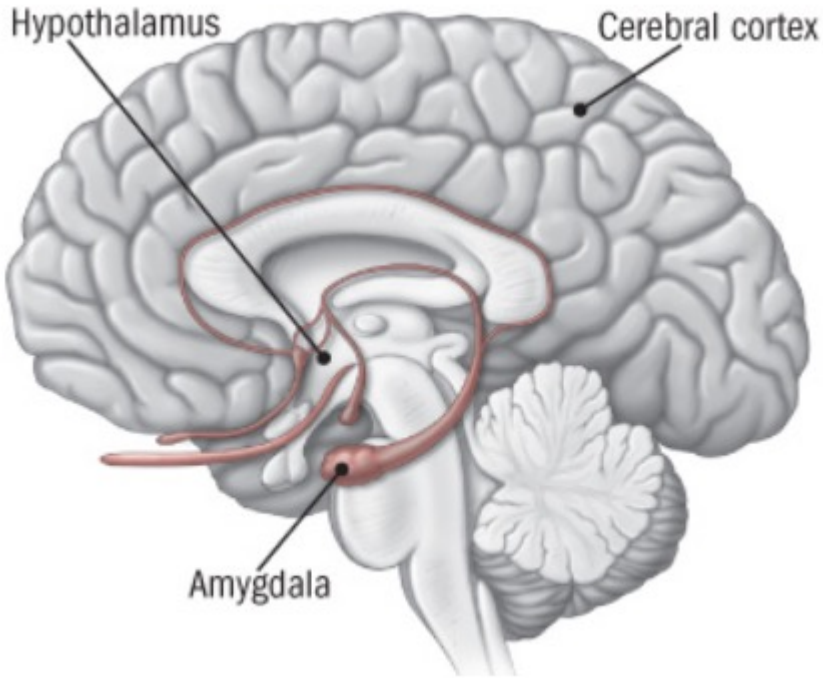
CBT for panic attacks and anxiety

Review of the stress response

- The stress response involves both the sympathetic and the parasympathetic nervous system.
- Sympathetic nervous system
  - “Fight or flight”
  - Arousal of the system

- Parasympathetic nervous system
  - “Rest and digest”
  - Calming
  - Conserves energy

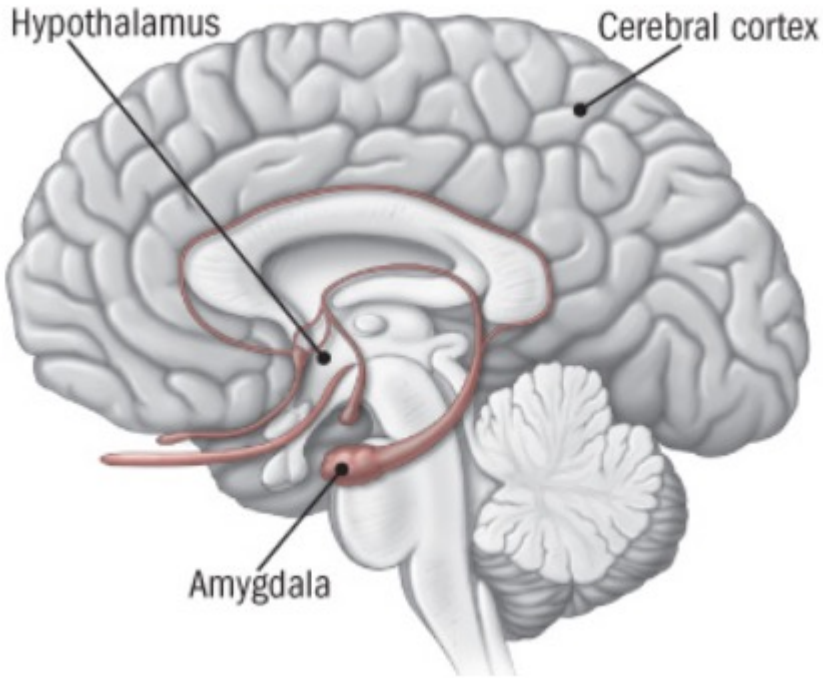
Stress response



- Amygdala
  - Contributes to emotional processing

https://www.health.harvard.edu/staying-healthy/understanding-the-stress-response

Stress response



- Adrenal glands and Epinephrine
  - Heart rate increases
  - Blood pressure increases
  - Breathing becomes more rapid
    - Extra oxygen is sent to the brain
  - Release of glucose and fats from storage

https://www.health.harvard.edu/staying-healthy/understanding-the-stress-response

Symptoms of a panic attack

- *Four or more of the following…*
- Palpitations, pounding heart, or accelerated heart rate
- Sweating
- Trembling or shaking
- Sensations of shortness of breath or smothering
- A feeling of choking
- Chest pain or discomfort
- Nausea or abdominal distress
- Feeling dizzy, unsteady, lightheaded, or faint
- Feelings of unreality (derealization) or being detached from oneself (depersonalization)

Treatment for panic attacks

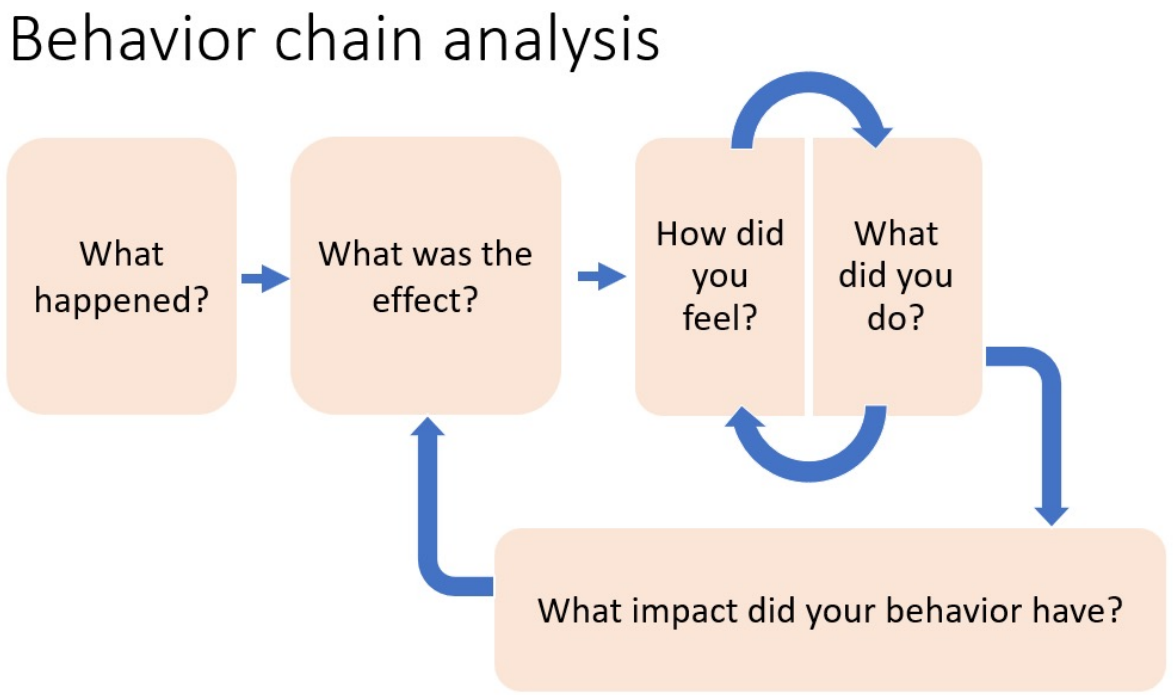
- During a panic attack…
  - Relaxation and grounding
  - Diver reflex
  - Safe environment
  - Ruling out medical cause
- Before and after
  - **Education**
  - Behavioral chain analysis, recognizing triggers
  - Practicing relaxation techniques

Relaxation

- Deep breathing
  - Can be difficult in the moment, for a patient with a history of panic attacks it can be helpful to have them practice at times when they are calm first
- Grounding techniques
- Cold water on the face
- “Diver reflex”

Trigger recognition

- Sometimes there are clear triggers and sometimes there are not
- History of panic attacks can be their own trigger



Making an environment safe

- Give the patient physical space
- Try not to be between the patient and the exit
- Speak slowly
- One person speaking at a time
- Do not just tell them to “stop” or “calm down”

For follow up with anxiety…

- Further evaluation of patient's overall symptoms
  - Comorbid mood disorder?
  - Trauma?
  - Substance use?
- Education about avoidance and anxiety
- Use of relaxation and grounding techniques
- Medication management
  - Benzodiazepine use can be helpful with panic disorder but sparingly
  - SSRI treatment for anxiety
    - Number needed to treat
    - Dosing often needs to be higher than for depression

How can we use CBT for ourselves?

- Recognizing that our own thoughts, feelings, and behaviors are connected
- Just like psychoeducation is first step for patients, understanding our own reactions is important
- If emotions are hard to directly change, focus on coping skills related to ***thoughts*** and ***behaviors***

References

Beck, J. S., & Beck, A. T. (2011). Cognitive behavioral therapy: Basics and beyond. *New York: Guilford*.

Dorflinger, L. M., VI, A. H. F., & Foran-Tuller, K. A. (2016). Training primary care physicians in cognitive behavioral therapy: A review of the literature. *Patient education and counseling, 99*(8), 1285-1292.

Felitti, Vincent J et al. (1998) Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. American Journal of Preventive Medicine , Volume 14 , Issue 4 , 245 – 258.

Peeks, C.J. (2013). Lexicon for Behavioral Health and Primary Care Integration: Concepts and Definitions Developed by Expert Consensus. AHRQ.

Martell, C. R., Dimidjian, S., & Herman-Dunn, R. (2013). *Behavioral activation for depression: A clinician's guide.* Guilford Press.

Mignogna, J., Hundt, N. E., Kauth, M. R., Kunik, M. E., Sorocco, K. H., Naik, A. D., ... & Cully, J. A. (2014). Implementing brief cognitive behavioral therapy in primary care: A pilot study. *Translational behavioral medicine*, *4*(2), 175-183.

Possemato et al. (2018) Patient outcomes associated with primary care behavioral health services: A systematic review. General Hospital Psychiatry,

Shepardson, R. L., Funderburk, J. S., & Weisberg, R. B. (2016). Adapting evidence-based, cognitive-behavioral interventions for anxiety for use with adults in integrated primary care settings. *Families, Systems, & Health*, *34*(2), 114-127. doi:10.1037/fsh0000175